

Electricity in the Home: How, Why and When do People Use it?

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Introduction

To meet emissions targets and ensure that future demands can be met innovative ways need to be found of fostering a transition to low carbon, secure, affordable energy systems. In addition to developing low carbon forms of energy production, efforts also need to focus on the ways that people can reduce their energy consumption in everyday life, including in the home.

By investigating the way that people relate to and interact with electricity in their homes this project will consider how to best support and facilitate uptake of innovative electricity supply technologies, and attempt to understand how people's relationships with electricity affects their consumption.

Research Questions

- How do consumers understand and interact with their existing electricity supply system in the home?
- What are the reasons and motivations for implementing future changes in network provision?
- What role do consumers and engineers imagine electricity will have in future society and domestic settings?
- How socially acceptable are planned future step-changes in electricity network provision, and how might this impact people's lifestyles?



Background

Modern lifestyles are highly energy intensive. Many domestic routines and practices - which help form people's identities (Warde, 1994) - rely upon or make use of appliances that consume electricity, and households today are responsible for approximately one third of the UK's total energy consumption (DECC, 2011a).

Efforts are being made to design and engineer products that are less energy intensive, and new ways of generating and distributing electricity are being discovered and implemented.

However, a key aspect in reducing electricity consumption—which is important for ensuring that electricity networks can adequately meet demand in the future, as well as other government requirements such as meeting carbon dioxide emissions and climate change targets—is understanding and changing people's energy-related behaviour (DECC, 2011b).

Reducing consumption at an individual and household level will make the technological challenges that electrical engineers face more achievable.

References

- DECC, 2011a. *Energy Use in the United Kingdom: Domestic sector fact sheet* – updated 2011. Department of Energy and Climate Change.
- DECC, 2011b. *Behaviour Change and Energy Use*. Department for Energy and Climate Change.
- Jasanoff, S. and Kim, S. H. 2009. Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea. *Minerva* 47(2), pp 119-146.
- Macnaghten, P. 2010. Researching technoscientific concerns in the making: narrative structures, public responses, and emerging nanotechnologies. *Environment and Planning A* 42, pp 23-37.
- Pickersgill, M. 2011. Connecting neuroscience and law: anticipatory discourse and the role of sociotechnical imaginaries. *New Genetics and Society* 30(1), pp. 27-40.
- Warde, A. 1994. Consumption, Identity-Formation and Uncertainty. *Sociology*, 28, pp 877-898.

Methods

The project will involve three phases:

1. Focus group discussions with members of the public will be conducted to investigate people's consumption-related behaviours, perceptions and lifestyles.
2. Working alongside 'Top and Tail' network partners (primarily engineers) scenarios based on planned future changes in electricity systems and network provisions will be developed. The role that 'Sociotechnical Imaginaries' (Jasanoff and Kim, 2009) play in the formation of these imagined futures will also be investigated through observations and informal interviews.
3. Follow-up interviews (with members of the phase 1 focus groups) will be conducted to further investigate people's relationships with electricity in the home, and the resources developed in phase 2 will be presented to participants to identify their perceptions towards the scenarios being presented.



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